BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	

SUPPLEMENTAL COMMENTS OF SOUTHWESTERN BELL TELEPHONE COMPANY ON COST PROXY MODELS

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CC Docket No. 96-45

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SUMMARY*

The various proxy cost models that have been submitted in this and other proceedings are generally quite complex, having many variable inputs, tables, and calculations, and neither sufficient time nor sufficient information about the models has been provided to perform a detailed review of any of them. However, the wide disparities in their cost outputs support SWBT's position that universal service support calculations should be based on an eligible carrier's actual costs. At a minimum, a model used to calculate support must realistically reflect a carrier's actual costs if the support is to be "sufficient" under Section 254. To date, none of the models meet that minimal criteria although the limited use of a model might be appropriate in only those instances where actual cost data cannot be disaggregated.

Criteria by which to judge the proxies should be adopted, and should include: (i) easy to administer and simple to implement; (ii) reasonably reflect actual costs in order to ensure that support is "sufficient;" (iii) appropriately relate costs and support levels; and (iv) reflect cost differences that actually exist geographically by LEC.

Although BCM and BCM2 purport to use CBGs, in reality neither does. Instead, simplifying and faulty assumptions are made about their shapes, which result in voids and overlaps and in difficulty mapping actual wire center boundaries and customers to those hypothetical CBGs. Use of either real CBG boundaries or the assumed boundaries would also result in additional expense to LECs in order to perform the necessary mappings.

Various SWBT comparisons of outputs from the BCM2 model and from the CPM model with USF funding and actual SWBT costs are included and demonstrate the variances between the models themselves, and between the models and reality.

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* The abbreviations used in this Summary are as defined in the main text.

TSLIRC is an inappropriate basis on which to base universal service calculations. The use of forward-looking incremental costs would fail to account for investment that has not been recovered (due in part to regulatory depreciation policies) and is being used by LECs to provide local service and to fulfill carrier of last resort obligations.

The Hatfield model should also be rejected, especially given that its proponents have never used the model to assess the interexchange market in which they operate and which is perceived to be vigorously competitive. The Hatfield model takes an extremely simplistic and unrealistic view and uses several flawed or erroneous assumptions about incumbent LEC networks. Its results therefore do not reflect actual LEC costs, especially those taken in order to fulfill readiness-to-serve obligations to meet customer expectations and regulatory requirements. Indeed, the output of the Hatfield model concludes that incumbent LEC costs should be less than one-half of current LEC revenues. The Hatfield model is unrealistically premised on a textbook version of long run, forward-looking costs that assume or imply that incumbent LECs can replace existing network plant at will without regard to existing embedded costs or to unrecovered investment.

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SUPPLEMENTAL COMMENTS OF
SOUTHWESTERN BELL TELEPHONE COMPANY
ON COST PROXY MODELS

Southwestern Bell Telephone Company (SWBT) files these Supplemental Comments on proxy cost models, as requested in the Public Notice, DA 96-1094, released July 10, 1996, by the Common Carrier Bureau (Public Notice).

In connection with the various proceedings regarding universal service (CC Docket Nos. 80-286 and 96-45) and interconnection (CC Docket No. 96-98), several cost proxy models have been submitted for consideration. These Supplemental Comments will provide a limited analysis of the Benchmark Cost Model (BCM), the Benchmark Cost Model 2 (BCM2), and the Cost Proxy Model (CPM). In addition, general comments are provided regarding the deficiencies of the Hatfield model and the total service long run incremental cost (TSLRIC) method it employs.

Since some of the proxy models have only recently been released and all are generally quite complex, the short time frame has not permitted a detailed review. Moreover, SWBT cannot predict with any certainty the time necessary to conduct a detailed review of any of the proposed models. For example, the BCM2 was released on July 3, 1996, seven (7) days before the Public Notice was released. This BCM2 model consists of approximately 360 variable inputs, 21 tables with 170 calculations, and a spreadsheet with 165 calculations for each Census

Block Group (CBG). Moreover, the processing is done using 'macros' which are protected from any review by the user. Similarly, although the CPM has been released for use in this proceeding, SWBT has been unable to date to obtain a demonstration version, much less a full working model, because of disagreements over the licensing agreement. However, SWBT has contracted with INDETEC to run the CPM for Texas and has provided a summary of those preliminary results within these Supplemental Comments.

The basic question that has to be answered in this process is "Which Cost is Right?" By way of Attachment 1, SWBT presents the results obtained so far in its analysis. The wide disparities between the results produced by the various proxy models support SWBT's positions that none produce reliable results and that universal service support requirements should be based on an eligible carrier's actual costs. In order to meet the requirements in Section 254(e) that support be "sufficient," the Joint Board and the Commission must select an approach which provides results that realistically reflect the actual costs of providing universal service. The likelihood of reconciling or melding the proposed cost proxy models to yield a single model which produces realistic results is slim, especially within a reasonable time frame. Until a proxy model is developed which can adequately reflect actual costs, actual costs must continue to be relied upon as they are today by the Commission.

However, adoption of a cost proxy may be reasonable in limited situations. In the event that a LEC is unable to disaggregate its actual study area costs as necessary to better target universal service support, then limited use of a proxy might be appropriate only to disaggregate

only those actual costs. Such limited use of a proxy model would minimize the distortions that would be created by the currently proposed cost proxy models.

I. OBJECTIVES SHOULD BE ESTABLISHED FOR PROXIES

SWBT is not necessarily opposed to the concept of a proxy, but no proxy should be considered without meeting pre-established criteria. Using Section 254(a)(5) of the Telecommunications Act of 1996 (Act) provides a starting point:

> Specific and predictable support mechanisms.—There should be specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service.

Other criteria should also be used, including the following:

- Be easy to administer and simple to implement;
- Reasonably reflect actual costs. This does not mean that actual costs must be replicated, but that the costs should be realistic enough to ensure that the costs are "sufficient to advance and promote universal service"
- Appropriately relate costs and support levels;
- Reflect cost differences that actually exist geographically by LEC, potentially at a wire center level.

II. GENERAL CONCERNS ABOUT PROXIES

The current proxies use Census data to estimate the number of lines served and the serving arrangement. While the use of an area smaller than a study area is more consistent with the manner in which competition is developing, a number of concerns still exist with the use of

CBGs. In reality, neither BCM nor BCM2 actually use CBGs. Instead, these models generally assume that the CBG boundaries are square in order to facilitate the calculations. However, most CBGs are really irregular in shape as shown on Attachment 2. As a result, both voids and overlaps are created when the assumed CBG boundaries are actually mapped to the true CBG boundaries. These voids and overlaps result in the costs being determined on an assumed equivalent square CBG, thereby distorting the level of support necessary for the actual service area. Further distortion results from the fact that LECs' service areas/customer locations may be significantly different than the area mapped by the CBG. A multitude of errors are created when using the assumption of equivalent square CBGs, the voids/overlaps created thereby, and the mapping of the actual service areas and customer locations to the artificial CBG boundaries. See Attachment 2 for an example of the mapping problems that exist.

Secondly, the CBG boundaries do not coincide with existing LEC serving areas, nor are they likely to coincide with the serving areas of new entrants. As a result any proxy that employs a CBG approach would require that the serving eligible carriers all map their customers to the CBG boundaries described in the particular model, in order to determine the support per customer. SWBT, and presumptively most other LECS, do not presently have this detailed customer mapping. This would be an additional expense that would have to be incurred in connection with this hypothetical approach.

The number of CBGs also exacerbates the problems with such a hypothetical approach. Within SWBT's five-state operating area there are 1,236 individual wire centers. Based on the

distance from the CBG centroid to the closest wire center, the BCM maps 20,757 CBGs to SWBT wire centers. Based on the distance from the CBG centroid to the closest SWBT-owned wire center, the BCM maps 20,197 CBGs to those wire centers. Based on an overlay mapping of CBGs to SWBT wire center boundaries, SWBT has determined that its serving territory actually encompasses or overlaps 31,909 CBGs. Therefore, for a minimum of 11,152 CBGs, the hypothetical serving arrangements and cost development are incorrect with respect to SWBT.

In addition to the "Which Cost is Right?" question posed on Attachment 1, the table below summarizes some of the information that has been compiled for SWBT's Texas study area:

TABLE 1
COMPARISON OF MODEL DATA -- TEXAS

	ACTUAL SWBT STUDY	BCM 2	Prelim. CPM
Total Wire Centers	517	522	493
Common Wire Centers	482	482	482
Lines	7,302,142	7,535,012	6,296,419
Investment			
Loop Only	$7,073,552,545	$6,438,136,310	
Loop and Switch	$9,135,214,753	$7,264,013,771	$8,750,070,939
Annual Costs			
Loop Only	$2,122,594,311	$2,270,820,099	
Loop and Switch	$2,781,454,068	$2,483,097,861	$2,512,533,599

While these differences are narrower than the those derived from the original BCM, they still need to be more fully understood and further tested against actual data.

III. COMPARISON OF ACTUAL DATA TO BENCHMARK COST MODEL 2 DATA

SWBT has compared the results of the BCM2 to the output of the Universal Service Fund (USF) data. The results are shown on a company-by-company basis in two comparisons for the five States in which SWBT operates. The Table 2 comparison is of the actual loop investment per line under USF to the hypothetical investments under BCM2. Table 3 compares the monthly cost per line. This data was based on a re-run of the BCM2 for these five States, with the fixed and variable switching costs set to zero. The results are shown below:

TABLE 2
COMPARISON OF BCM2 AND USF LOOP INVESTMENT
PER LINE -- SWBT's FIVE STATES

	USF	BCM2	DIFFERENCE	% DIFF.
SWBT -				
ARKANSAS	$1,138.69	$1,183.31	$44.62	4%
KANSAS	$849.16	$933.36	$84.20	10%
MISSOURI	$831.62	$885.40	$53.78	6%
OKLAHOMA	$955.60	$1,003.37	$47.77	5%
TEXAS	$919.17	$844.26	- $74.91	-8%
TOTAL -				
ARKANSAS	$1,261.29	$1,494.35	$233.06	18%
KANSAS	$943.56	$1,190.68	$247.12	26%
MISSOURI	$953.97	$1,160.55	$206.58	22%
OKLAHOMA	$1,069.46	$1,194.24	$124.78	12%
TEXAS	$1,014.17	$965.93	- $48.24	-5%

See Attachment 3 for a company-by-company listing of the results for Arkansas, Kansas, Missouri Oklahoma and Texas.

TABLE 3

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COMPARISON OF BCM2 AND USF LOOP COST PER LINE, PER MONTH -- SWBT'S FIVE STATES

	USF	BCM2	DIFFERENCE	% DIFF.
SWBT - ARKANSAS	$24.87	$31.54	$6.67	27%
KANSAS	$21.02	$26.66	$5.64	27%
MISSOURI	$17.31	$25.70	$8.39	48%
OKLAHOMA	$20.61	$28.02	$7.41	36%
TEXAS	$19.76	$24.92	$5.16	26%
TOTAL - ARKANSAS	$28.23	$37.62	$9.39	33%
KANSAS	$23.63	$31.68	$8.05	34%
MISSOURI	$20.94	$31.08	$10.14	48%
OKLAHOMA	$22.97	$31.76	$8.79	38%
TEXAS	$22.02	$27.29	$5.27	24%

See Attachment 4 for a company-by-company listing of the results for Arkansas, Kansas, Missouri Oklahoma and Texas.

Although the overall differences in costs may be narrower than those derived from the original BCM, there remain significant differences at a study area and State level.

IV. COMPARISON OF ACTUAL DATA TO COST PROXY MODEL DATA

SWBT contracted with INDETEC, the firm that developed the CPM with Pacific Telesis, to run data for the State of Texas through the CPM. The preliminary results show the following in a comparison of the investment per loop:

TABLE 4

COMPARISON OF CPM AND SWBT COST PER LINE -- TEXAS

SWBT - TEXAS CPM Compared to SWBT Actual	Number of Wire Centers	Percent of Wire Centers
CPM Diff. <= 50%	17	4%
50% < CPM <= 75%	72	15%
75% < CPM <= 100%	121	25%
100% < CPM <= 125%	116	24%
125% < CPM <= 150%	78	16%
Over 150%	78	16%

See Attachment 5 for a wire center listing of the results for SWBT-Texas.

A similar comparison of actual costs per line to the costs per line derived from BCM2 shows the following:

TABLE 5

COMPARISON OF BCM2 AND SWBT COST PER LINE -- TEXAS

SWBT - TEXAS BCM2 Compared to SWBT Actual	Number of Wire Centers	Percent of Wire Centers
BCM2 Diff. <= 50%	42	9%
50% < BCM2 <= 75%	154	32%
75% < BCM2 <= 100%	165	34%
100% < BCM2 <= 125%	72	15%
125% < BCM2 <= 150%	32	7%
Over 150%	16	3%

See Attachment 5 for a wire center listing of the results for SWBT Texas.

The two preceding tables demonstrate that the deaveraged actual cost per line at the more narrowly targeted wire center level continues to differ significantly from the per line costs derived from BCM2.

V. TOTAL SERVICE LONG RUN INCREMENTAL COSTS (TSLRIC) ARE INAPPROPRIATE FOR USE IN QUANTIFYING UNIVERSAL SERVICE

The focus on incremental costs is misplaced and may disadvantage incumbent LECs as the myriad of issues surrounding universal service support is addressed. The Act directs that

universal service subsidies implicit in prevailing LEC rates be replaced with an explicit subsidy mechanism (thereby permitting LEC rate structures to reflect more economically efficient prices). However, the focus to date has been on the differences between incumbent LECs' incremental costs for local exchange services and the LECs' tariff rates for those services. Such a comparison will not yield an accurate estimate of the extent of universal service support currently embedded in LEC rates.

By definition, incremental costs are forward-looking. Incremental costs reflect the use of the most current technologies and production processes without regard to deployment or implementation status. Incremental costs do not account for the expenditures already incurred by LECs to fulfill their carrier of last resort (COLR) and universal service obligations. To ensure potential customers would have access to telephone service in a timely manner, LECs have undertaken certain investments because of their obligation to meet social policy objectives, not business conditions, market characteristics, or financial opportunity. In particular, incumbent LECs have invested in and deployed network facilities in rural, remote, and other high-cost areas with low demand -- investment which may otherwise be contrary to prudent business strategies.

The regulatory process has traditionally ensured that LECs' prices for telephone service in these high-cost areas could remain significantly below the levels required to make the investments profitable by averaging the costs with lower cost areas and by shifting a portion of the costs to toll and access customers. Further, LEC depreciation of capital investments has been extended over long periods to keep LEC expenses and the resulting prices as low as possible.

Incremental costs significantly understate a LEC's actual total network expenditures, particularly in high-cost areas. Furthermore, universal service support distribution based on the currently proposed cost proxy models will not accurately target that support to the appropriate geographical service areas or customers.

VI. THE HATFIELD STUDY IS COMPROMISED BY A NUMBER OF FLAWS

A. The Accuracy of Hatfield's Analysis and TSLRIC Estimates Is Unproven

To benchmark the Hatfield study and provide a standard for comparison, results obtained from an identical analysis of interexchange carrier (IXC) operations should prove the validity and reliability of this model. Since the IXCs are perceived as operating in a vigorously competitive market, using the Hatfield model with the same assumptions and estimation techniques proposed for the analysis of incumbent LEC data should derive IXCs' TSLRIC of interexchange service and, concomitantly, should very closely approximate prevailing market prices for long distance services. Presumably, IXC investments were indeed premised on market conditions, consumer demand characteristics, and their own individual profit objectives. Interestingly, however, no such comparison has been offered. The IXCs, most notably MCI, have never taken the opportunity to empirically demonstrate that competitively determined prices (i.e., long distance rates) indeed approximate TSLRIC. Absent such analysis of IXC data using the Hatfield model by its own proponents, one is left to question the validity and reliability of this model. In sum, the accuracy of a model can only be assessed by comparing the results of that model to a known and measurable index -- in this case, actually incurred costs.

The Hatfield model also includes flawed assumptions about incumbent LEC networks, which lead to faulty cost factor assumptions and, ultimately, invalid estimates of capital and operating expenses. The Hatfield model takes an extremely simplistic and unrealistic view of incumbent LEC topology, resulting in an inaccurate assessment of incumbent LEC plant investment. Among other problems, wire center areas are inaccurately depicted as geographically square with uniformly distributed populations. The Hatfield model also includes erroneous assumptions regarding loop architectures within wire center areas and unrealistic design parameters for critical items such as fill factors. All of these faulty planning assumptions result in unrealistic wire center layouts and facility routes.

Other unfounded assumptions are used. Hatfield's erroneous assumptions regarding interoffice traffic and usage patterns, SS7 routing data, and other incumbent LEC network and usage characteristics further distort cost inputs. Additionally, the cost factors used in the Hatfield model to determine recurring expenses do not include appropriate assumptions regarding the incumbent LECs' capital structures (e.g., the cost of capital, debt/equity ratios, service life). Hatfield also uses improper economic lives (i.e., 18 years) for the depreciation of plant facilities. In addition, Hatfield's operating expense factors incorrectly assume all LEC cost structures are the same. Finally, the Hatfield model ignores pertinent accounts, yet includes accounts not reflective of the industry. As a result, the Hatfield model includes irrelevant costs while omitting costs that are relevant.

If it is believed that prices equal to TSLRIC will prevail in competitive markets, that revenues generated from such prices will be sufficient to sustain profitable operations while preserving universal service, and that estimates of incumbent LEC inefficiencies produced by the Hatfield study approximate (even distantly) reality, there would be little need for public policy and regulatory intervention to foster competition in local exchange markets. The Hatfield study contends that TSLRIC costs are less than half (i.e., 44%) the total revenues of Tier 1 LECs. Hatfield constructs these estimates based on the assumptions that local exchange networks (including wire center locations) are deployed as efficiently as possible and that only state-of-the-art technologies are employed, without any regard to statutory or regulatory obligations.

If the premise that prices should equal TSLRIC is believed and if such prices are sustainable under the confines of the universal service requirements within the Act, then the Hatfield study's estimates of TSLRIC will provide the entrant with a set of prices which are less than half prevailing incumbent LEC rates yet high enough to ensure profitable operations. In effect, the Hatfield study concludes that new entrants are likely to be twice as efficient as incumbents, thereby presenting any firm, including MCI, with a business plan for constructing an efficient local exchange network. If this is indeed true, facilities-based competition should immediately arise in local exchange markets with entrants bringing substantial pressure on ILECs to reduce prices by 50% or exit the market, while continuing to preserve the universal service requirements of the Act.

Instead, however, some potential competitors are seeking regulatory assistance to secure incumbent LEC services and unbundled network elements at prices equal to their calculations of the incumbent LECs' TSLRIC and without regard for universal service obligations. Perhaps the Hatfield study misrepresents the true efficiency of incumbent LEC network operations or perhaps potential entrants fear that prices equal to TSLRIC, while supposedly profitable for incumbent LECs, will not prove profitable and sustainable for themselves.

B. Hatfield's Version of TSLRIC Is Unrealistic

The Hatfield study's adoption of a textbook version of "long run," forward-looking cost embodying the most efficient technology necessarily requires the assumption that existing incumbent LEC backbone networks do not exist and costs can be meaningfully computed anew on a regular, "scorched earth" basis. This, of course, is self-serving since it dampens the resulting cost figures, thereby supporting low universal service support. It makes little sense to assume or imply that incumbent LECs can replace existing network equipment at will, disregarding embedded costs or unrecovered investment, with more efficient technologies. In reality, ILEC networks include an integrated mix of technologies of various vintages.

Historic LEC network investments reflect, to some extent, COLR obligations and the attainment of universal service policy objectives. Such incumbent LEC investments were necessarily not premised solely on prudent business decisions and profit motives. To assume these social costs are irrelevant is also to assume the social policies driving them are equally irrelevant. Once constructed, incumbent LEC network components cannot simply be rearranged

more efficiently each time a new service is added to the existing LEC output mix, nor can the embedded and unrecovered costs be ignored.

In order to continue to attract capital, incumbent LECs must be in a position to convince investors that recovery of total operating costs, including a return on investment, will be realized and reasonable profits can be expected. Investors will likely disagree with Hatfield's assumption that sunk costs are irrelevant. The difficulty and expense of attracting investment capital will rise substantially if Hatfield's cost estimates are adopted in this proceeding. Adoption of the Hatfield model will, in effect, stifle incumbent LECs' incentives and ability to continue investing in technologically advanced network components.

C. Hatfield's Assumptions Are Inaccurate And Unrealistic

Applying TSLRIC estimates that assume continuous operation at full capacity (i.e., without excess capacity [Hatfield, p. 12]) are unrealistic. Incumbent LEC networks were intentionally constructed to meet peak demand. Readiness-to-serve and COLR mandates require facilities in place to quickly meet demands for local service. Incumbent LEC facilities are expected to be sufficiently adequate to meet consumers' demands and rules adopted by regulatory bodies for timely connection to the public switched network. Excess capacity is thus an inherent part of an incumbent LEC's local exchange network. Although the costs associated with the incumbent LECs' obligations outlined above will not likely be borne by entrants, those costs and obligations cannot be ignored in determining the level of universal service support that is necessary and would be "sufficient."

VII. CONCLUSION

The current proxies need to be investigated further before being seriously considered as substitutes for actual costs in terms of calculating the amount of universal service support necessary and sufficient to meet the requirements of the Act. A cost proxy model should provide a reasonable reflection of actual costs, both in terms of the overall cost to be considered and in the distribution of those costs to a small geographic area, such as a wire center. Only by providing such a comparison can the requirements of the Act be met.

Respectfully submitted,

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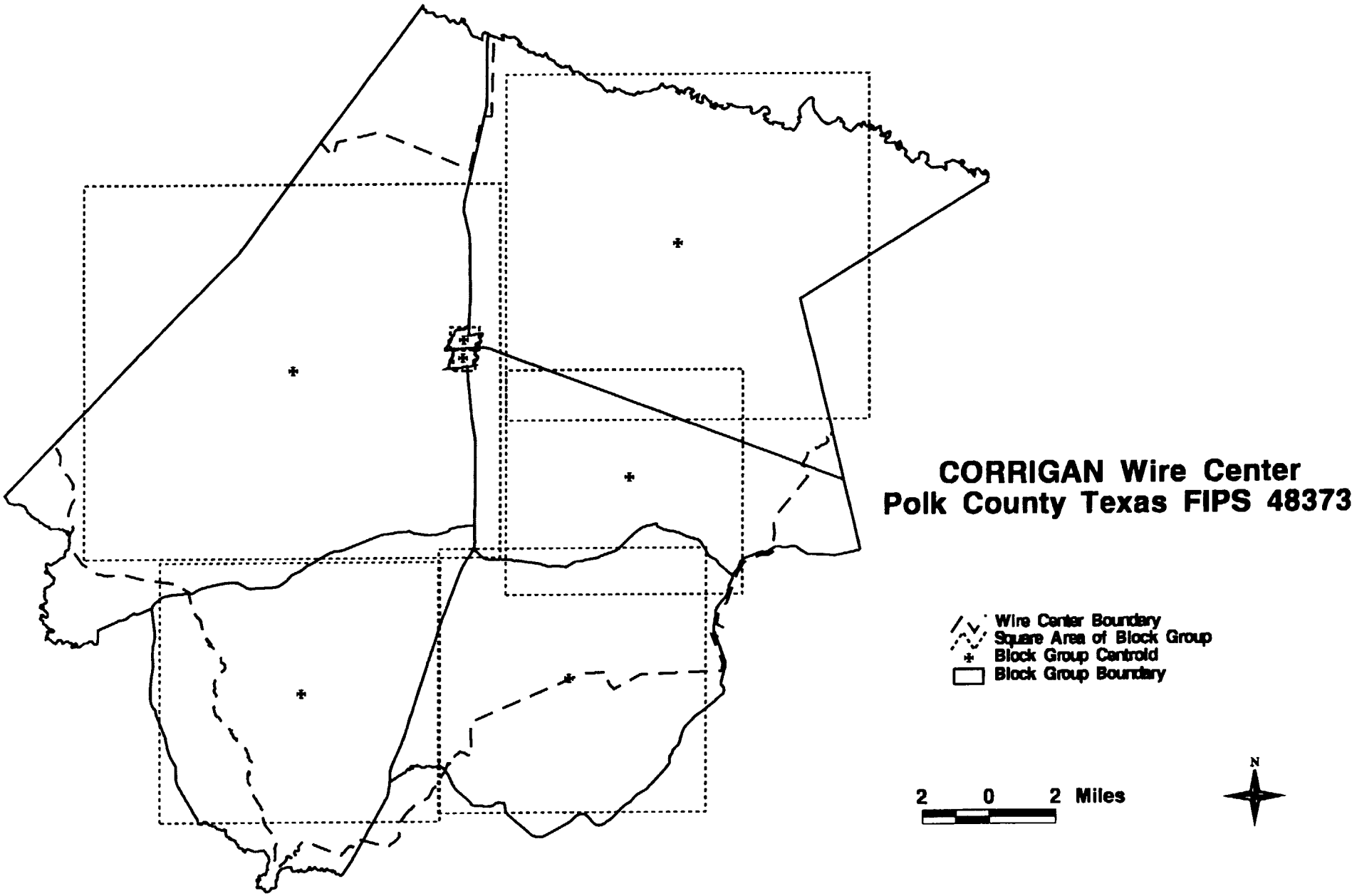
WHICH COST IS RIGHT?

	Actual Costs (per loop, per month)	Original Hatfield (per household, per month)	New Hatfield (per line, per month)	Benchmark Cost Model #1 (per household, per month) Expenses based on ARMIS	Benchmark Cost Model #1 (per household, per month) Expenses based on Hatfield	Benchmark Cost Model #2 (per line, per month) Expenses based on ARMIS	Cost Proxy Model (per line, per month)
Nationwide							
Loop costs only	$20.17 USF			$15.59	$11.31		
Loop + switch costs		$21.36		$23.04	$16.71	$29.98	
SWBT - Arkansas							
Loop costs only	$24.67 USF			$16.22	$11.77	$31.54	
Loop + switch costs	$39.59			$24.40	$17.69	$34.24	
TOTAL - Arkansas							
Loop costs only	$27.98 USF		$16.17	$24.12	$17.49	$37.62	
Loop + switch costs				$33.56	$24.34	$40.97	
SWBT - Kansas							
Loop costs only	$20.59 USF			$15.23	$11.05	$26.66	
Loop + switch costs	$35.27			$23.23	$16.85	$29.28	
TOTAL - Kansas							
Loop costs only	$22.88 USF		$14.41	$22.62	$16.40	$31.68	
Loop + switch costs				$33.01	$23.94	$35.37	
SWBT - Missouri							
Loop costs only	$17.34 USF			$13.12	$9.51	$25.70	
Loop + switch costs	$36.83			$20.66	$14.98	$28.11	
TOTAL - Missouri							
Loop costs only	$21.44 USF		$14.28	$19.47	$14.13	$31.08	
Loop + switch costs				$28.43	$20.61	$34.17	
SWBT - Oklahoma							
Loop costs only	$20.90 USF			$11.36	$8.24	$28.02	
Loop + switch costs	$36.05			$19.38	$14.05	$30.60	
Total Oklahoma							
Loop costs only	$23.07 USF		$14.11	$17.22	$12.49	$31.76	
Loop + switch costs				$26.59	$19.29	$35.06	
SWBT - Texas							
Loop costs only	$19.93 USF			$13.36	$9.69	$24.92	
Loop + switch costs	$37.03			$20.73	$15.03	$27.25	$34.00 EST.
Total Texas							
Loop costs only	$22.20 USF		$11.55	$16.97	$12.31	$27.29	
Loop + switch costs				$25.14	$18.23	$29.98	
	1993 Data from USF Data Submission of September, 1995 SWBT Study 10/95	MCI Hatfield Study July, 1994	MCI Filing 7/7/96 CC Dockets No. 96-45 & 96-98	Joint Sponsors (US West/SPRINT /NYNEX/MCI), 12/1/95 Filing in CC Docket No. 80-286 and SWBT Ex Parte Dated 2/22/96		US West/Sprint Ex Parte, 7/3/96 CC Docket No. 96-45	Preliminary results of Texas data run by INDETEC for SWBT

ATTACHMENT 2



COMPARISON OF AVERAGE INVESTMENT PER LINE

Company	USF Average Invest per Line	BCM2 Average Invest per Line	BCM2 as Percent of USF
ARKANSAS			
ALLTEL ARKANSAS INC	$1,751.53	$2,210.39	126.20%
ARKANSAS TEL CO	$1,149.22	$2,070.63	180.18%
CEN ARKANSAS TEL CO	$1,475.81	$3,329.17	225.58%
CENTURY TEL MTN HOME	$1,491.22	$2,046.71	137.25%
CENTURY TEL OF AR	$1,959.98	$2,984.84	152.29%
CENTURY TEL OF SO AK	$3,160.02	$2,637.83	83.48%
CENTURY TEL READFLD	$1,458.98	$2,350.32	161.09%
CLEVELAND CO TEL CO	$1,850.44	$2,495.43	134.86%
CONTEL AR DBA GTE AR	$1,531.47	$1,844.12	120.42%
CONTEL MO DBA GTE MO	n/a	$3,561.23	n/a
CONTEL OF KS INC -AR	$933.93	$1,681.55	180.05%
DECATUR TEL CO	$1,059.17	$1,917.27	181.02%
E RITTER TEL CO	n/a	$2,130.46	n/a
GTE SOUTHWEST - AR	$1,429.37	$1,914.52	133.94%
LAVACA TEL CO	n/a	$1,974.18	n/a
MADISON COUNTY TEL	$1,368.05	$2,466.08	180.26%
MAGAZINE TEL CO	n/a	$2,322.31	n/a
MOUNTAIN VIEW TEL CO	n/a	$2,339.17	n/a
NO ARKANSAS TEL CO	$2,005.90	$3,274.12	163.22%
	$1,633.54		0.00%
PRAIRIE GROVE TEL CO	n/a	$1,792.61	n/a
RICE BELT TEL CO	n/a	$3,301.18	n/a
SCOTT COUNTY TEL CO	$6,040.52	$3,137.87	51.95%
SO AR TEL CO INC	$1,308.28	$2,737.65	209.26%
SO WEST AR TEL COOP	$2,024.36	$1,616.12	79.83%
SOUTHWESTERN BELL	$1,138.69	$1,183.31	103.92%
TRI-CTY TEL CO INC	$1,731.77	$3,134.36	180.99%
WALNUT HILL TEL CO	$1,860.83	$2,227.30	119.69%
YELCOT TEL CO	$1,403.77	$2,672.62	190.39%
YELL COUNTY TEL CO	$968.53	$2,427.68	250.66%
TOTAL ARKANSAS	$1,261.29	$1,494.35	118.48%

COMPARISON OF AVERAGE INVESTMENT PER LINE

Company	USF Average Invest per Line	BCM2 Average Invest per Line	BCM2 as Percent of USF
KANSAS			
BLUE VALLEY TEL CO	$1,475.87	$3,340.83	226.36%
COLUMBUS TEL CO	n/a	$707.49	n/a
COUNCIL GROVE TEL CO	n/a	$1,761.17	n/a
CRAW-KAN TEL COOP-KS	$1,234.18	$2,546.22	206.31%
CUNNINGHAM TEL CO	$1,445.54	$3,345.65	231.45%
ELKHART TEL CO INC	$539.96	$1,463.79	271.09%
GOLDEN BELT TEL ASSN	$1,657.46	$3,981.46	240.21%
GORHAM TEL CO INC	n/a	$4,108.63	n/a
GREAT PLAINS COMM	n/a	$4,834.06	n/a
H & B COMM INC	$1,532.79	$4,026.66	262.70%
HAVILAND TEL CO INC	n/a	$3,318.61	n/a
HOME TEL CO INC - KS	$1,384.65	$3,021.60	218.22%
JBN TEL CO INC	$1,481.12	$3,117.41	210.48%
KANOKLA TEL ASSN	$1,640.12	$2,776.40	169.28%
LA HARPE TEL CO INC	n/a	$2,492.71	n/a
MADISON TEL CO INC	$1,809.64	$2,126.07	117.49%
MO-KAN DIAL INC	$1,408.98	$2,157.64	153.13%
MOUNDRIDGE TEL CO	$1,502.97	$2,244.08	149.31%
MUTUAL TEL CO	$1,086.02	$2,910.52	268.00%
PEOPLES MUTUAL TELCO	$1,969.51	$2,697.54	136.96%
PIONEER TEL ASSN INC	$1,857.49	$2,238.10	120.49%
RAINBOW TEL COOP	n/a	$3,146.68	n/a
RURAL TEL SERV CO	$2,053.11	$3,842.79	187.17%
S & A TEL CO INC	$1,782.77	$2,929.94	164.35%
S & T TEL COOP ASSN	$4,624.59	$4,833.37	104.51%
SO CENTRAL TEL ASSN	$2,547.35	$3,980.83	156.27%
SO CTRL TELECM KIOWA	n/a	$2,028.57	n/a
SOUTHERN KANSAS TEL	$1,245.31	$3,100.92	249.01%
SOUTHWESTERN BELL	$849.16	$933.96	109.99%
SUNFLOWER TEL CO INC	$1,473.56	$3,170.69	215.17%
TOTAH TEL CO INC	$2,242.57	$2,843.37	126.79%
TRI-COUNTY TEL ASSN	n/a	$3,414.01	n/a
TWIN VALLEY TEL INC	$1,486.75	$3,220.40	216.61%
UNITED TEL ASSN INC	$1,827.81	$2,697.59	147.59%
UNITED TEL CO OF IA	n/a	$1,794.36	n/a
UNITED TEL OF KS	$1,113.04	$2,379.90	213.82%
UNITED TELCO MO - KS	$1,714.16	$1,346.04	78.52%
UNITED TELCO OF KS	n/a	$1,740.74	n/a
WAMEGO TEL CO INC	n/a	$1,900.26	n/a
WHEAT STATE TEL CO	$1,385.44	$2,966.21	214.10%
WILSON TEL CO INC	$1,394.98	$3,605.78	258.48%
ZENDA TEL CO INC	$1,493.29	$3,953.17	264.73%
TOTAL KANSAS	$943.56	$1,190.68	126.19%

COMPARISON OF AVERAGE INVESTMENT PER LINE

Company	USF Average Invest per Line	BCM2 Average Invest per Line	BCM2 as Percent of USF
MISSOURI			
ALLTEL MISSOURI INC	$2,081.96	$2,697.96	129.59%
ALMA TELEPHONE CO	n/a	$2,473.75	n/a
BOURBEUSE TEL CO	n/a	$2,299.95	n/a
BPS TELEPHONE CO	n/a	$2,168.25	n/a
CASS COUNTY TEL CO	n/a	$2,008.08	n/a
CHARITON VALLEY TEL	n/a	$2,549.10	n/a
CHOCTAW TELEPHONE CO	n/a	$3,875.95	n/a
CITIZENS TEL CO - MO	$1,057.72	$1,539.32	145.53%
CONTEL AR DBA GTE AR	$1,729.59	$3,549.08	205.20%
CONTEL MO DBA GTE MO	$1,629.18	$2,204.04	135.28%
CRAW-KAN TEL COOP-MO	n/a	$2,790.88	n/a
EASTERN MISSOURI TEL	$1,546.80	$2,764.54	178.73%
ELLINGTON TEL CO	n/a	$4,594.91	n/a
FARBER TEL CO	n/a	$3,066.98	n/a
FIDELITY TEL CO	$914.94	$1,522.26	166.38%
GOODMAN TEL CO	$1,258.41	$1,972.14	156.72%
GRANBY TELEPHONE CO	n/a	$1,962.22	n/a
GRAND RIVER MUTUAL	$1,492.42	$2,587.41	173.37%
GREEN HILLS TEL CORP	n/a	$2,882.86	n/a
GTE NORTH INC - MO	$1,055.21	$1,455.73	137.96%
GTE SOUTHWEST - AR	n/a	$4,104.49	n/a
HOLWAY TEL CO	$1,754.96	$3,171.68	180.73%
IAMO TEL CO	n/a	$2,489.82	n/a
KANSAS STATE TEL -MO	$1,131.54	$1,595.31	140.99%
KINGDOM TELEPHONE CO	$2,052.35	$2,476.54	120.67%
KLM TELEPHONE CO	n/a	$2,281.39	n/a
LATHROP TELEPHONE CO	n/a	$1,796.76	n/a
LE-RU TELEPHONE CO	$2,338.43	$2,908.37	124.37%
MARK TWAIN RURAL TEL	n/a	$3,119.28	n/a
MCDONALD CO TEL CO	n/a	$2,047.65	n/a
MID-MISSOURI TEL CO	n/a	$2,783.05	n/a
MILLER TEL CO INC	n/a	$3,173.40	n/a
MISSOURI TEL CO	$1,235.67	$2,662.06	215.43%
MO-KAN DIAL INC	$975.68	$2,435.23	249.59%
NE MISSOURI RURAL	$2,170.43	$2,952.21	136.02%
NEW FLORENCE TEL CO	n/a	$2,815.18	n/a
NEW LONDON TEL CO	$1,608.78	$1,988.08	123.58%
ORCHARD FARM TEL CO	$2,595.71	$1,746.26	67.27%
OREGON FARM MUTUAL	n/a	$2,733.09	n/a
OZARK TELEPHONE CO	n/a	$1,665.39	n/a
PEACE VALLEY TEL CO	n/a	$4,034.63	n/a
ROCK PORT TEL CO	n/a	$2,578.82	n/a
SENECA TEL CO	n/a	$1,930.57	n/a
SOUTHWESTERN BELL	$831.62	$885.40	106.47%
STEELVILLE TEL EXCH	$1,606.29	$4,081.87	254.12%
STOUTLAND TEL CO	$1,932.55	$4,264.06	220.64%
UNITED TEL CO OF MO	$1,030.51	$1,546.70	150.09%
WHEELING TEL COMPANY	n/a	$3,743.17	n/a
TOTAL MISSOURI	$953.97	$1,160.55	121.65%